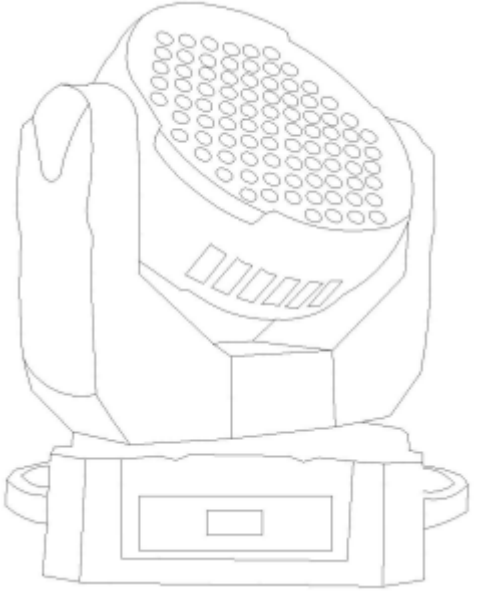
USER MANUAL

LED ZOOMING MOVING HEAD

MH-91



Please Read Over This Manual Before Operating The Light Fixture

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1 PRODUCT SPECIFICATIONS

1.1 PRODUCT SPECIFICATIONS

Waterproof rating:IP20

Electrical

◆Voltage:AC100~240V，50/60Hz

◆Rated Power:310W

LED

◆LED:91PC(22R+23G+22B+12W+12A)

◆Cooling:Forced air convection

Function

◆Color mixing / Strobe / White balance / RGB calibration / Dim 4 / Fan speed

Operation

◆Control mode:Master-Slave/Auto/ Sound

◆LCD display

◆DMX512 Chs:12CHS/ 15CHS

Pan/Tilt

◆Pan 540 ° Tilt 270 °

◆Pan/Tilt speed

◆User-selectable Pan/Tilt ranges

◆ Size:450*315*400mm

◆ Weight:13kg

1.2 SAFETY WARNING

IMPORTANT

【ALWAYS READ THE USER MANUAL BEFORE OPERATION.】
【PLEASE CONFIRM THAT THE POWER SUPPLY STATED ON THE PRODUCT IS THE SAME AS THE MAINS POWER SUPPLY IN YOUR AREA.】

- This product must be installed by a qualified professional.
- Always operate the equipment as described in the user manual.
- A minimum distance of 0.5m must be maintained between the equipment and combustible surface.
- The product must always be placed in a well ventilated area.
- Always make sure that the equipment is installed securely.
- DO NOT stand close to the equipment and stare directly into the LED light source.
- Always disconnect the power supply before attempting and maintenance.
- Always make sure that the supporting structure is solid and can support the combined weight of the products.
- The earth wire must always be connected to the ground.
- Do not touch the power cables if your hands are wet.

ATTENTION

⚠ ATTENTION ⚠

- This product left the place of manufacture in perfect condition. In order to maintain this condition and for safe operation, the user must always follow the instructions and safety warnings described in this user manual.
- Avoid shaking or strong impacts to any part of the equipment.
- Make sure that all parts of the equipment are kept clean and free of dust.
- Always make sure that the power connections are connected correct and secure.
- If there is any malfunction of the equipment, contact your distributor immediately.
- When transferring the product, it is advisable to use the original packaging in which the product left the factory.
- Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
- The lamp (LED) shall be changed if it has become damaged or thermally deformed.

2.1 SETTING UP(STAND ALONE)

The LED fixture can be used as a stand alone unit. The stand alone functions AUTO 1, AUTO 2 can be activated without the need to connect to any controller or connecting to any other equipment.
Simply, access the <operation> menu from the DISPLAY and select the target program to activate.

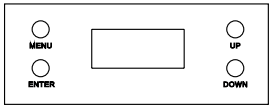
2.2 FUSE REPLACEMENT

Remove the safety cap by a screwdriver.

- Fetch the old fuse from safety cap.
- Install a new fuse.
- Install the safety cap.

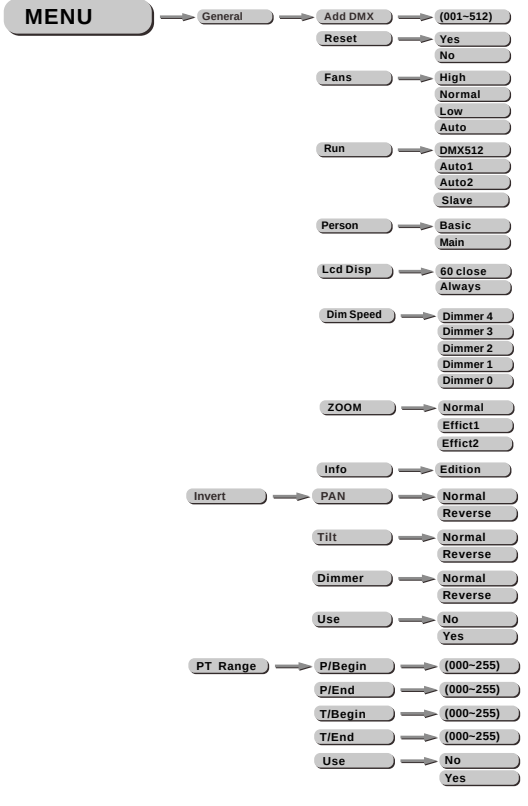
3 DISPLAY PANEL OPERATION

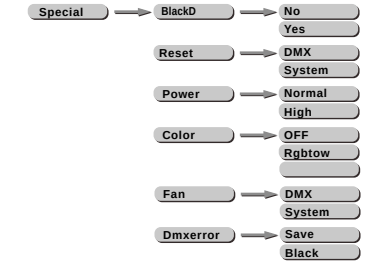
3.1 BASIC

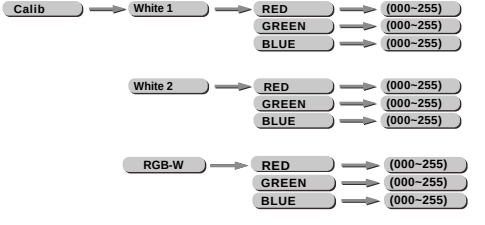


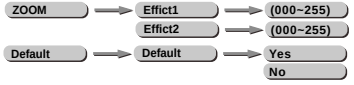
【**MENU**】Scroll through the main menu or exit from the current sub-menu
【**ENTER**】Enter the currently selected menu or confirm the current function value
【**DOWN**】Scroll 'DOWN' through the menu list or decrease the value of the current function
【 **UP** 】Scroll 'UP' through the menu list or increase the value of the Current function

3.2 MENU

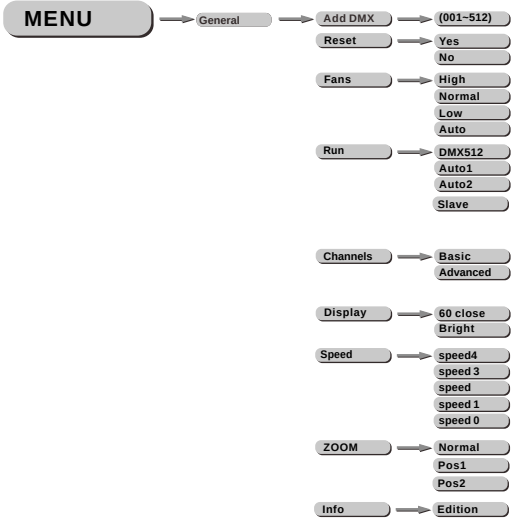








3.3 GENERAL

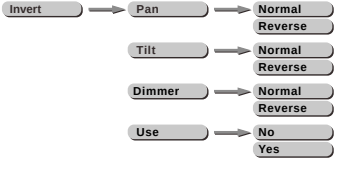


- 【Address】Enter【***Add DMX***】 to set the DMX Address, which is from (001-512)
- 【 Reset】In order to rest custom modest to default, select 【***Reset***】
- 【 Fans】Enter【***Fans***】 to select the working mode of fan: 【***High***】 is for fast; 【***Normal***】 is for normal; 【***Low***】 is for slow ; 【***Auto***】 is for Auto
- 【Run】Enter【***Run***】 to select the operation mode: 【***DMAX512***】;【***Auto1***】; 【***Auto2***】;【***Slave***】;

- 【 hannels】Enter【***Person***】 to select the DMX channel modes:【***Basic***】; 【***MAIN***】 .
- 【Display】Enter【***Display***】 to select the lighting time of the LCD display panel.

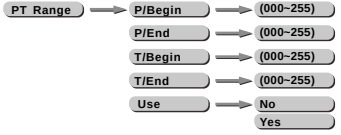
- 【Dimmer】Enter【***Dimmer***】 to select dimmer mode and dimmer speed. When DIMMER is set to 【***Off***】, then RGBW and MASTER DIMMER are linear.
  The Dim 1/2/3/4 are speed modes of the non linear dimmer , 【***Dim1***】 is the faster, while ***Dim4***】 is the slowest.
  The factory default setting is 【***Dim4***】.
- Select the【***ZOOM***】range.【***POS1***】&【***POS2***】set the small position for the zoom function.Note that when using DMX to control the fixture, the user will only be able to access upto the set ZOOM position.It is not possible to adjust beyond the set position.
- Enter【***Info***】 to see the version of the software.

3.4 INVERT



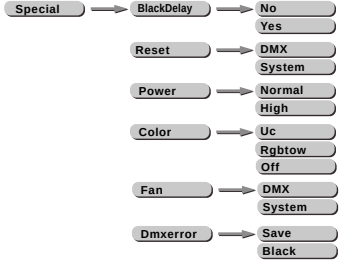
【***Invert***】
- Select【***Pan***】/【***Tilt***】/【***Dimmer***】to set 【***Normal***】 or 【***Reverse***】
- Enter【***Use***】 and set【***Yes***】 to run the new setting

3.5 PT RANGE

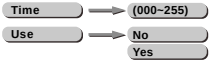


- 【***P/Begin***】Set pan start value 【***000~255***】
- 【***P/End***】Set pan finish value 【***000~255***】
- 【***T/Begin***】Set Tilt start value 【***000~255***】
- 【***T/End***】Set Tilt finish value 【***000~255***】
- 【***Use***】Enter【***Use***】 and select【***Yes***】to open the operation of X/Y angle

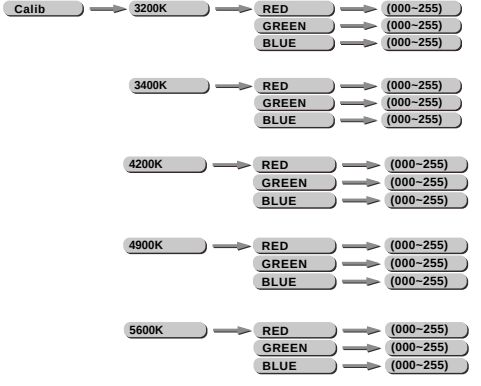
3.6 SPECIAL

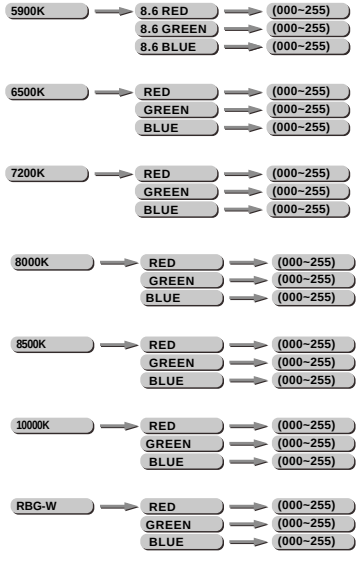


- 【BlackDelay】Enter【***BlackDelay***】 to choose 【***No***】 without delay or 【***Yes***】 3seconds delay
- 【Reset】Enter【***Reset***】 to choose【***DMX***】 DMX control reset or 【***System***】 DMX cannot control reset
- 【Power】Enter 【***Power***】 to choose the power as NORMAL or HIGH.
- 【Color】【***COLOR***】 is for activate/unactivate the color calibration functions.
- 【Fan】Choose【***DMX***】DMX to control fan or 【***System***】 DMX cannot control fan
- 【Dmxerror】Choose【Save】in order to save the last DMX data in case of DMX signal error .Choose【Black】in order to blackout in case of DMX signal error.



3.9 CALIB

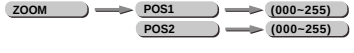




【*Calib*】

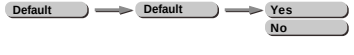
● Enter the 【***Calib***】to select white color of different color temperature.
● There are 12 pre-programmed White colors plus RGB TO WHITE and can be edited by using 【***Red***】, 【***Green***】, 【***Blue***】

3.10 ZOOM



● Calibrate the position of POS1&POS2. Set position as 0 for smallest zoom position.

3.11 DEFAULT



【*Default*】

● This functions will reset all setting to the original factory setting

4 USING A DMX512 CONTROLLER

4.1 CHANNEL ASSIGNMENT

● Note: This product have three DMX512 channel configuration: 【***MAIN***】And【***BASIC***】.

MAIN

CHANNEL	VALUE	FUNCTION
1	000~255	**DIMMER**
2	000~255	**STROBE**
3		**COLOR/WHITE MACRO**
		NO UNCTION
	006~010	FULL POWER
	011~030	RED 000% GREEN FU LUE %0
	031~050	RED DWN GREEN 00% LUE %0
	051~070	RED %0 GREEN 00% LUE FU
	071~090	RED %0 GREEN DWN LUE 00%
	091~110	RED FU GREEN %0 LUE 00%
	111~130	RED 000% GREEN %0 LUE DWN
	131~150	RED 000% GREEN FU LUE FU
	151~170	RED DWN GREEN DWN LUE 00%
	171~200	RED 002% GREEN 00% LUE 00% WHITE 00%
	201~205	WHITE1 : 3200K
	206~210	WHITE2 : 4400K
	211~215	WHITE3 : 4200K
	216~220	WHITE4 : 4900K
	221~225	WHITE5 : 5500K
	226~230	WHITE6 : 5900K
	231~235	WHITE7 : 6500K
	236~240	WHITE8 : 7200K
	241~245	WHITE9 : 8000K
	246~250	WHITE10 : 8500K
	251~255	WHITE11 : 10000K
4	000~255	**RED**
5	000~255	**GREEN**
6	000~255	**BLUE**
7	000~255	**WHITE**
8	000~255	**AMBER**
9	000~255	**PAN**
10	000~255	**PAN FINE**
11	000~255	**TILT**

CHANNEL	VALUE	FUNCTION
12	000~255	**PAN FINE**
13	000~009 010~255	**PAN/TILT SPEED**
14	000~255	**ZOOM**
15		**CONTROL**
	000~019	NO FUNCTION
	020~039	PAN/TILT FEEDBACK ACTIVATED
	040~059	PAN/TILT FEEDBACK DEACTIVATED
	060~079	FAN AUTO
	080~099	FAN LOW
	100~119	FAN NORMAL
	120~139	FAN FAST
	140~149	AUTO1 ACTIVATED (AFTER 3 SECS)
	150~159	AUTO2 ACTIVATED (AFTER 3 SECS)
	160~169	TEST ACTIVATED (AFTER 3 SECS)
	170~179	CUSTOM ACTIVATED (AFTER 3 SECS)
	180~199	SOUND1
	200~219	RESET ACTIVATED (AFTER 3 SECS)
	220~235	NO FUNCTION
	236~239	DIM0
	240~243	DIM1
	244~247	DIM2
	248~251	DIM3
	252~255	DIM4

BASIC

CHANNEL	VALUE	FUNCTION
1	000~255	**DIMMER**
2	000~255	**STROBE**
3		**COLOR/WHITE MACRO**
	000~005	NO FUNCTION
	006~010	FULL COVER
	011~030	RED 010% / GREEN PU / BLUE %0
	031~050	RED DOWN / GREEN 010% / BLUE %0
	051~070	RED %0 / GREEN 010% / BLUE PU
	071~090	RED %0 / GREEN DOWN / BLUE 010%
	091~110	RED PU / GREEN %0 / BLUE 010%
	111~130	RED 010% / GREEN %0 / BLUE DOWN
	131~150	RED 010% / GREEN PU / BLUE PU
	151~170	RED DOWN / GREEN DOWN / BLUE 010%
	171~200	RED 001% / GREEN 010% / BLUE 010% WHITE 010%
	201~205	WHITE1 : 3200K
	206~210	WHITE2 : 3400K
	211~215	WHITE3 : 4200K
	216~220	WHITE4 : 4900K
	221~225	WHITE5 : 5500K
	226~230	WHITE6 : 5900K
	231~235	WHITE7 : 6500K
	236~240	WHITE8 : 7200K
	241~245	WHITE9 : 8000K
	246~250	WHITE10 : 8500K
	251~255	WHITE11 : 10000K
4	000~255	**RED**
5	000~255	**GREEN**
6	000~255	**BLUE**
7	000~255	**WHITE**
8	000~255	**AMBER**

CHANNEL	VALUE	FUNCTION
9	000~255	**PAN**
10	000~255	**TILT**
11	000~255	**ZOOM**
12	0-19	**CONTROL** NO FUNCTION
	20-39	PAN/TILT FEEDBACK ACTIVATED
	40-59	PAN/TILT FEEDBACK DEACTIVATED
	60-79	FAN AUTO
	80-99	FAN SLOW
	100-119	FAN NORMAL
	120-139	FAN FAST
	140-149	AUTO1 (ACTIVATED AFTER 3 SECS)
	150-159	AUTO2 (ACTIVATED AFTER 3 SECS)
	160-169	TEST (ACTIVATED AFTER 3 SECS)
	170-179	CUSTOM (ACTIVATED AFTER 3 SECS)
	180-189	SOUND1
	190-199	SOUND1
	200-219	RESET (ACTIVATED AFTER 3 SECS)
	220-235	NO FUNCTION
	236-239	DIM0
	240-243	DIM1
	244-247	DIM2
	248-251	DIM3
	252-255	DIM4

No	ITEM
1	Head front cover
2	Lead aperture
3	lens
4	Capture lens plate
5	LED support
6	Fan plate
7	Fan
8	Head back cover
9	Motor driver PCB
10	Motor
11	Optical wheel
12	Y-small gear

No	ITEM
13	Arm board
14	Base cover 1
15	IEC power socket
16	DMX connection board
17	Base cover 2
18	Fan
19	Pan belt
20	Power supply
21	Display PCB
22	Display support
23	U-frame
24	Y-motor support

No	ITEM
25	Y-large gear
26	Pan belt
27	Driver PCB
28	Head structure
29	LED PCB
30	Capture lens
31	Capture lens plate2
32	Capture lens plate1